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Assessing Social Barriers to Healthy Lifestyle Practices in Hypertensive Idoma Communities in Nigeria for Identifying Nursing Intervention Needs with Step 1 of Intervention Mapping

Daniel Cletus Okpe[1,2]*, Daniel Grace[1,2], Oyedele Emmanuel[2], Ogunyewo Abayomi Oluwatoyin[2], Regidor III Dioso[2]

[1]Department of Nursing Science, University of Jos Nigeria, Jos 930105, Plateau Nigeria

[2]Faculty of Nursing, Lincoln University College, Wisma Lincoln, 12-18, Jalan SS 6/12, 47301 Petaling Jaya, Selangor, Malaysia

**Corresponding Author's Email: dcokpe@lincoln.edu.my, onojaokpe@yahoo.com*

ABSTRACT

Background: There is a paucity of knowledge and awareness regarding the variables that act as social barriers to healthy lifestyles and self-care behaviors among hypertension patients in the proposed study population. Hence, the objective of the study was to determine social lifestyle factors acting as barriers to the eleven (11) healthy lifestyle practices amongst individuals with high blood pressure (BP) in communities of the Idoma tribe, Benue State. **Methods:** A mixed-methods design was used for the study. Questionnaires and focus group discussions were used to elicit information from 1000 respondents. The data were analyzed using descriptive statistics and percentages, while thematic analysis was used for qualitative information. **Results:** Age, stress, forgetfulness, a lack of support, the high cost of medications, a lack of resources, a lack of self-motivation, a lack of time, social factors, and a fear of social isolation were among the major barriers to adherence to healthy lifestyles. Understanding these barriers is important for nurses to assist patients in overcoming these obstacles by offering focused assistance. **Conclusion:** The study has revealed social lifestyle barriers to hypertension in these communities.

Keywords: Barriers; Healthy; Idoma; Lifestyles

INTRODUCTION

In Nigeria, hypertension prevalence rates for adults over the age of 18 range from 2.1% to 47.2%. One out of every five male Nigerians, according to estimates, has excessive blood pressure (Ukoha-Kalu *et al*., 2020). There are many factors to consider, including age, gender, income, education, co-morbidity, home area, and time since hypertension diagnosis. Lleras-Muney(2022). Even though the healthcare provider has received training to recognize illness patterns and is therefore qualified to make diagnoses (Meidert *et al*., 2023), The degree of self-management among hypertension patients may vary depending on several personal and medical factors and recommend treatment options; none of this would be very helpful if the patient takes a passive role in maintaining their health (Charchar *et al.*, 2024). Therefore, it is necessary to acknowledge the patient as a healthcare partner with both duties and rights (Vanstone *et al*., 2023). Better self-care makes managing chronic conditions simpler. Even if the sickness is not fully treated, it is anticipated that the patient's quality of life will increase. People with chronic illnesses control their conditions on their own. It is impossible to escape this fact. Patients choose what to eat, how much salt to consume, whether or not to exercise, and how carefully to adhere to a treatment plan each day. Patients have the power to "veto" any decisions made by a healthcare practitioner before they leave the clinic or place of business. As a result, people are in charge of their care regardless of what the healthcare professional does or does not do (Darkwa, 2016). Based on a theoretical foundation, there is a paucity of knowledge regarding the variables that affect or act as social barriers to healthy lifestyles and self-

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care behaviors among hypertension patients in the proposed study population. The health belief model, which has been successfully applied in the design of health initiatives, will be employed. In addition to Reisi *et al*. (2016), researchers have focused on the role of moderating factors (demographic, social, and structural factors) as well as individual views when assessing the likelihood of engaging in an activity (perceived vulnerability, perceived severity, perceived benefits, perceived obstacles, guidance for action, and self-efficacy). This model proposes that a person's decision and motivation to engage in a specific behavior are influenced by a variety of variables, including the person's perception of their susceptibility to risk and the severity of that risk, their belief in the usefulness of the perceived action in lowering disease risk, their comprehension of the health benefits (perceived benefits), and their perception of the challenges and risks (perceived risks) (self-efficacy) (Boskey, 2023).

Although pharmaceutical and lifestyle interventions are successful in lowering the risk of cardiovascular events linked to hypertension and regulating blood pressure (BP), population-level BP management has been a challenge to attain.

According to Omoronyia *et al*. (2021), the asymptomatic character of hypertension has been attributed to non-self-management. Medication side effects include electrolyte imbalances, impotence, nausea, headaches, diarrhea, skin conditions, and depression. Despite the significance of these findings, it is still unclear why certain hypertension individuals are unable to self-manage their condition. Studies from Nigeria in particular are strictly biomedical or restricted to epidemiological, etiological, and treatment-related topics (Garba & Sa'idu, 2020). Therefore, without taking into account the patient's psychosocial experience or proactive beliefs, perspectives, and cultural factors, physiological, sociological, and cultural variables are undervalued, and patients are frequently labeled compliant or non-compliant. The rise in hypertension among Nigerians' rapidly urbanizing and westernizing lifestyles, the ambiguities surrounding self-management as a multi-factorial phenomenon, and the financial burden non-self-management places on developing nations call for ongoing research aimed at elucidating self-management within a more comprehensive, sociological, clinical, knowledge, values, and beliefs framework (Bamgboye *et al*., 2024). To enhance self-management, it is crucial to elucidate the above constructs. In addition, the Idoma tribe has a great deal of faith in the phenomenon known as "Alekwu" (the spirit of deceased fathers or ancestral spirits). The Alekwu is believed to have a significant impact on the lives of their offspring; it has the power to both prevent evil from affecting them and to cause evil (Kanu, 2020) illness and death for those who commit sacred sins, such as married women who commit adultery, cursing a neighbor to harm or kill them, or using a witchcraft medium to harm a neighbor. The "Alekwu" event, which is held every six months, sees the displacement of the local gin (burukutu), pounded yam, palm wine, and dancing with an acrobatic display. Masquerade, thought to be the ancestors in disguise, debuts in December (Anizoba & Johnson, 2021). During these festivals, the masquerade parades through the marketplace, thrashing people with canes (sticks) as they prepare pounded yam on the first day and rice on the second. Chicken, cock, and goat are sacrificed to please the dead. The Idomas attribute disease and sickness to the Alekwu (ancestral spirit), witches, wizards, sin against the earth, sin against parental rules, not appeasing late parents, not burying them again, not offering a cow as a sacrifice to them, and your involvement in the theft of other people's property, Daniel (2023). These harmful stereotypes, misconceptions, and spiritual beliefs have an impact on how people seek out health.

When ill, some individuals turn to psychics, mediums, pastors, native doctors, and herbalists, or engage in fasting and sacrifices to their deceased parents. Conventional medicine is often only considered as a last resort when the condition worsens. If healthcare providers are not vigilant, family members may secretly administer local concoctions to hospitalized patients, believing the illness is caused by diabolism, witches, or wizards. The extent to which these practices impact hypertension management is not empirically known. Therefore, this study aimed to identify the social lifestyle factors that act as barriers to the eleven (11) healthy lifestyle practices among individuals with high blood pressure in Idoma communities, Benue State, Nigeria.

METHODOLOGY

This research used an intervention mapping protocol. Intervention mapping was developed as a reaction to a lack of comprehensive frameworks for health promotion program development. Intervention mapping aims

to help health promoters develop the best possible intervention. It has six steps. Step 1 is an assessment of the study population. Step 2 is the definition of performance and change objectives based on scientific analyses of health problems and problem-causing factors. Step 3 is the selection of theory-based intervention methods and practical applications to change (determinants of) health-related behavior. Step 4 is the production of program components, including design and production. Step 5 is program adoption, implementation, and sustainability, and step 6 is effect evaluation (Van der Beek, Steijn, & Groeneweg, 2023). This research is step 1 of the protocol that assesses the social lifestyle factor barriers among other objectives of the overall research that was developing activities on healthy lifestyles amongst hypertensives in the Idoma tribe of Nigeria. This needs assessment from the basic information that establishes the fundamental facts on social lifestyle barriers amongst the population studied.

Description of the Study Area

The western regions of Benue State are home to a group of people known as the Idoma. Most of the area is found inland, roughly 72 kilometers east of the Benue River's confluence with the Niger River, south of the latter. It is estimated that four million people live in Idoma. The Idoma are an ethnolinguistic group of Nigerians who live mostly in Benue State's western regions. This is because they make up the second largest ethnic group in the state, making up nine local government areas (L.G.A.s) with Ado, Agatu, Apa, Obi, Ohimini, Ogbadibo, Oju, Okpokwu, and Otukpo. There are nine local administrations in Idoma, according to Britannica (2024). Every local government is divided into districts. Every district is made up of clans. The district is divided into wards. While the clan head is in control of the clan, the district chief is in charge of the district. The public is informed by a town crier employed by the clan chief. Within the local government, ward chiefs oversee each ward. The tribe socializes by sipping beer, gin, and a native gin known as palm wine (burukutu).

Advocacy and Community Entry

Each of the nine local governments in the Idoma tribe, or clans, was the unit of data collection. A document from the executive secretary of the state health management board in Makurdi in the state capital was obtained to be permitted to access the villages and gather data. The board was notified in writing of this, and their approval was gained. The proposed meeting was held with the district heads of each of the nine local government regions' nine randomly selected districts. The clans that were chosen at random were then informed and visited, and their subjects were encouraged to appear on the scheduled date. The mobilization leader is the clan/village town crier. To distribute information, churches, mosques, schools, pamphlets, and age group meetings were used (Oluwabamide Abiodun, Adetayo, & Olufunsho, 2020).

Study Design

A mixed-methods design, or quantitative embedded with qualitative, was used in the investigation (Ngulube, 2022). A descriptive, correlational, predictive, cross-sectional, multi-community survey design was the quantitative component.

Study Population

There are four million adult members of the Idoma Tribe in Nigeria, and 41.5 percent of people have hypertension. Thus, there were 1,660,000 hypertensive patients in the nine local governments that comprise the Idoma tribe of Benue State, Nigeria, which constitutes the research population (Shukla, 2020).

Inclusion and Exclusion Criteria

Inclusion criteria: Hypertensive patients are those who have been diagnosed with high blood pressure for 3 months or more, as these have had the disease for a while and therefore are likely to share adequate experiences (Dekkers, Carey, & Langhorne, 2022). Exclusion criteria: an individual who is not an Idoma by tribe.

Sample Size Determination

Mathematical Formulae for Sample Size Determination created a sample calculation algorithm based on the assumption that the population has a normal distribution and entered the calculation for various population

sizes that the researchers utilized (Akosua *et al.*, 2021). Using the formula, the total sample for the research is 997 hypertensive patients, rounded up to 1000. Sampling techniques In this study, a probability sampling technique was applied by Makwana *et al*. (2023). A basic random sample of hypertensive patients was obtained by choosing the first patient, leaving out the next, and choosing the third. This means that unless the number of patients is sufficiently large for the specific community, a patient who meets the inclusion criteria is chosen at intervals of one. Thus, the district under study was chosen using a straightforward random process. The district names were scrawled on small pieces of paper and crammed into a basket. Someone called a child to select one. The district of choice was used to gather data. To gather data, the clan within each district was chosen using the same straightforward random sampling technique; a minimum of 111 samples were taken from each of the eight villages. Following clearance from the Lincoln Universal College Institution Board of Review to proceed with this study, a letter containing this plan and an application for authorization to carry out this investigation in the communities was delivered to the secretary of the Benue State Health Management Board in Makurdi.

With approval and an explanation of the goals and advantages of the research, the district heads of each local government's simple random selection districts were contacted. The clan leader, who had been chosen at random, was then approached and given an explanation of the goal. He set up a meeting with his cabinet. The town crier, as well as churches and mosques, publicized the free treatment and research for hypertension patients, along with the scheduled arrival date at the healthcare facility, the Center for the Program. With the help of qualified study assistants, including nurses and a doctor who consulted with patients, antihypertensive drugs were chosen by the researcher and given to the patient for free after consultation with the team physician (Kandi & Vadakedath, 2023).

Sampling Procedure

A district was chosen at the district level using a straightforward random sampling technique. Using a simple random technique, a clan was chosen from the district that was chosen for sampling; in this case, the clan's members were chosen from a basket that had yes and no paper pieces that were used for the research. This process was repeated on the days that data were collected until about 111 people with blood pressures that were 140/90 mmHg or above, or people with previously treated hypertension, were sampled (Makwana *et al*., 2023). The researcher moved on to the next clan and repeated the process until the numbers were complete (n = 111).

Data Collection Instrument

To gather data, a self-administered questionnaire was used for the quantitative information, while an interview guide was used to obtain the qualitative information. Data collection instrument validity The validity of the instrument was ensured by checking its face and content validity. Reliability was ensured by a pre-test. Using Crombach's alpha, the generated data was utilized to determine the instrument's internal coherence. Each size's trustworthiness coefficient as well as the scale's overall coefficient of assurance were determined (Kennedy, 2022). The instrument's overall dependability index was 95. This demonstrates that the tool was trustworthy and suitable for the current investigation. The study was permitted to access the target population obtained from the Executive Director, Benue State Health Management Board Makurdi. The principles of justice, beneficence, non-maleficence, veracity, confidentiality, and consent were all ensured (Olaniran & Baruwa, 2020).

Data Collection Procedure

The researcher and assistants arrived early at the facility before the respondents on the scheduled date. Patients were informed that participation was voluntary, with no negative consequences for declining, and assured of privacy as no names were recorded. Blood pressure was measured following standard guidelines, ensuring accuracy and consistency. Participants with readings of 140/90 mmHg or higher, or a history of hypertension, were asked to draw a "yes" or "no" from a basket to determine eligibility. Those who answered "yes" received the research questionnaire. This process continued until each LGA had at least 111 samples. The researcher and assistants, fluent in Idoma and English, helped those unable to read or speak English by reading and explaining the questionnaire, then marking the respondent's verified answers (Taherdoost, 2022). All

hypertensive participants needing medication received it after consultation with the team's medical doctor, regardless of research participation. The researcher thanked all participants, and the same protocol was followed in each selected community.

Qualitative Research Protocol

This study used a qualitative information-exploratory-descriptive methodology to completely understand the values, beliefs, and cultural barriers of hypertensives for not leading healthy lives. Semi-structured moderator guides were utilized to get qualitative data from participants. This design uses a Pro Foma guide, which enables a researcher to delve deeper into a group discussion that was audio-captured as needed. The semi-structured focus group interview guide was pretested with participants who shared similar characteristics with the study participants, and adjustments were made where necessary (Kaba *et al*., 2021). Data analysis Quantitative data collected from respondents via filled-out questionnaires was tallied, cleaned, and verified for accuracy (Drury *et al*., 2023). The analysis was done using frequency and presented in the table. Quantitative data collected from respondents via filled-out questionnaires was tallied, cleaned, and verified for accuracy. Analysis was done on statistics that characterize a scenario, like frequency.

The collected qualitative data were audio-recorded and subjected to thematic analysis. The audio recordings were faithfully transcribed, with exact quotes utilized to bolster emergent themes. To improve analysis, an audit trail that includes field notes, member check notes, and summaries was also utilized to provide background information and context for the interviews. An analysis of demographic characteristics was conducted using descriptive statistics. Trustworthiness, credibility, transferability, conformability, and dependability were ensured to take care of reliability and methodological rigor (Naeem *et al*., 2023).

Ethical Consideration

This study was approved by the Ethical committee of Benue State Hospitals Management Board, Nigeria with reference number HMB/OFF/215NOL.ll/487 dated 24th January, 2022.

RESULTS

Social Lifestyle Factors

The social barriers to medication included financial problems (96.9%), unintentional (93.9%), low socio-economic status (91.0%), and out-of-pocket payments (90.0%), among others (Table 1).

Table 1: Medication Adherence

S/N	Barrier Variables Items	Percentage (%)
1	Financial problem	96.9
2	Unintentional e.g. forgetfulness	93.9
3	Low socio-economic status	91.0
4	Out-of-pocket payment	90.0
5	Afraid of becoming dependent on them	84.3
6	Lack of support in the area of behavior and motivation	82.9
7	Poverty	78.7
8	The cost of drugs	77.9
9	No one to remind me	74.9
10	Verbal or social persuasion	70.7
11	Competing health priorities	70.5
12	Not having time	69.6
13	Age	69.3
14	Laziness	68.0
15	Difficulty in quitting an unhealthy lifestyle	67.9
16	Cost of caring for a person who is sick	67.8
17	Modifying factors	66.6

18	Advice from others	66.3
19	Traveling	62.5
20	Social norms	60.4
21	Being female	56.8
22	Regulation policy	56.3
23	Coming home late from work	51.5

The barriers to physical exercise included age (90.4%), no one to remind me (86.6%), unintentional (84.1%), and so on (Table 2).

Table 2: Physical Exercise

S/N	Barrier Variable Items	Percentage (%)
1	Age	90.4
2	No one to remind me	86.6
3	Unintentional	84.1
4	Lack of community resources	81.6
5	Competing health priorities	80.7
6	Modifying factors	80.2.
7	Coming home late from work	79.0
8	Laziness	78.9
9	Traveling	75.8
10	Social norms	73.5
11	Lack of support in the area of behavior and motivation	72.9
12	Advice from others	70.4
13	Low socio-economic status determines my	68.9
14	Difficulty in quitting an unhealthy lifestyle	68.5
15	Being a mother	67.8
16	Being a female	67.5
17	Verbal or social persuasion	64.2
18	Being in a public place	63.7
19	Being with family	61.9
20	Being married	58.5
21	Financial problem	54.2
22	The cost of caring for a person who is sick	52.6

The barriers to self-BP monitoring included financial problems (80.4%), age (77.1%), no one to remind me (77.9%), modifying factors (71.1%), among others (Table 3).

Table 3: Self –BP Monitoring

S/N	Barrier Variable Items	Percentages (%)
1	Financial problems	80.4
2	Age	77.1
3	No one to remind me	77.0
4	Modifying factors	71.1
5	Low socio-economic status	71.0
6	Traveling	70.8
7	Poverty	69.3
8	Unintentional	68.2
9	Lack of support in the area of behavior and motivation	62.1
10	Lack of community resources	61.4
11	Advice from others	60.4
12	Younger age	58.6
13	The cost of caring for a person who is sick	58.6
14	Not having time	54.8
15	Coming home late from work	52.5

16	Being female	51.8
17	Out-of-pocket payment	51.2
18	Laziness	50.9
19	Competing health priorities	50.5
20	Verbal or social persuasion determines my	50.1

The barriers to Dietary Approaches to Stop Hypertension (DASH) diet included financial problems (98.8%), difficulty in quitting unhealthy lifestyles (87.9%), low socio-economic status (87.8%), poverty (84.4%), no one to remind me (73.7%), and so on (Table 4).

Table 4: DASH Diet

S/N	Barrier Variable Items	Percentages (%)
1	Financial problems	98.8
2	Difficulty in quitting unhealthy lifestyles	87.9
3	Low socio-economic status	87.8
4	Poverty	84.4
5	No one to remind me	73.7
6	Lack of support in the area of behavior and motivation	73.0
7	Advice from others	72.9
8	Modifying factors	71.3
9	Unintentional	70.2
10	Verbal or social persuasion	69.9
11	Traveling	66.3
12	Assistance with food choices	66.3
13	Age	66.2
14	Being male	64.6
15	Social norms	63.3
16	Competing health priorities	62.3
17	Assistance with food preparation	61.6
18	Out-of-pocket payment	58.5
19	Lack of community resources	57.4
20	Not having time	57.0
21	Being married	56.6
22	Being with family	55.1
23	Laziness	54.5
24	Regulation policy	52.2
25	Being female	50.8

Dietary Approaches to Stop Hypertension (DASH)

The major barriers to adherence to a low-salt diet included lack of support (81.2%), being with family (81.1%), difficulty quitting an unhealthy lifestyle (81.0%), no one to remind me (72.9%), unintentional (71.6%), social norms (68.9%), and so on (Table 5).

Table: 5 Low Salt Diet

S/N	Barrier Variable Items	Percentage (%)
1	Lack of support in area of behavior and motivation	81.2
2	Being with family	81.1
3	Difficulty in quitting unhealthy lifestyle	81.0
4	No one to remind me	72.9
5	Unintentional	71.6
6	Social norms	68.9
7	Advice from others	65.1
8	Modifying factors	64.2

9	Traveling	61.2
10	Being male	60.0
11	Verbal or social persuasion	59.3
12	Low socio-economic status	56.2
13	Assistance with food preparation	51.7

The most important barriers to adherence to weight management were modifying factors (86.1%), difficulty in quitting unhealthy lifestyles (83.1%), lack of support in areas of behavior and motivation (81.2%), low socio-economic status (80.8%), age (80.3%), not having time (79.8%), laziness (78.4%), social norms (76.1%), being a mother (75.9%), no one to remind me (68.9%), lack of community resources (63.9%), among others (Table 6).

Table 6: Weight Management

S/N	Barrier Variable Items	Percentages (%)
1	Modifying factors	86.1
2	Difficulty in quitting unhealthy lifestyles	83.1
3	Lack of support in the area of behavior and motivation	81.2
4	Low socio-economic status	80.8
5	Age	80.3
6	Not having time	79.8
7	Laziness	78.4
8	Social norms	76.1
9	Being a mother	75.9
10	Assistance with food choices	74.0
11	Coming home late from work	72.8
12	Being female	70.0
13	Advice from others	69.9
14	No one to remind me	68.9
15	Unintentional	67..5
16	Assistance with food preparation	65.1
17	Lack of community resources	63.9
18	Traveling	61.4
19	Competing health priorities	61.0
20	Financial problem	58.4
21	Poverty	56.5
22	Being with family	53.7
23	Verbal or social persuasion	53.1
24	Regulation policy	52.2
25	High economic status	50.1

The major barriers to moderation in alcohol were modifying factors (80.0%), lack of support in the area of behavior and motivation (78.0%), advice from others (69.8%), verbal or social persuasion (63.1%), amonf other social lifestyle barrier factors (Table7).

Table 7: Moderation in Alcohol

S/N	Barrier Variable Items	Percentages (%)
1	Modifying factors	80.0
2	Lack of support in the area of behavior and motivation	78.0
3	Advice from others	69.8
4	Verbal or social persuasion	63.1
5	Difficulty in quitting unhealthy lifestyle	58.4
6	Age	58.0
7	Regulation policy	52.6
8	Social norms	51.5

On the other hand, both regulation policy (61.2%) and modifying factors (59.1%) were the only social barrier factors militating against adherence to non-smoking lifestyles (Table 8).

Table 8: Non-Smoking

S/N	Barrier Variable Items	Percentages (%)
1	Regulation policy	61.2
2	Modifying factors	59.1

The lack of support in the area of behavior and motivation (82.9%), low socio-economic status (82.1%), difficulty in quitting unhealthy lifestyles (75.4%), age (73.9%), no one to remind me (68.8%), being female (67.7%), poverty (67.4%), and advice from others (66.3%) were some of the barriers to adherence to stress control (Table 9).

Table 9: Stress Control

S/N	Barrier Variable Items	Percentages (%)
1	Lack of support in the area of behavior and motivation	82.9
2	Low socio-economic status	82.1
3	Difficulty in quitting unhealthy lifestyle	75.4
4	Age	73.9
5	No one to remind me	72.5
6	Modifying factors	68.8
7	Being female	67.7
8	Poverty	67.4
9	Being a mother	67.4
10	Advice from others	66.3
11	Social norms	63.4
12	Unintentional	61.8
13	Financial problems	59.7
14	Cost of caring for a person who is sick	56.6
15	Younger age	56.3
16	Regulation policy	54.6
17	Competing health priorities	53 .5
18	Verbal or social persuasion	53.0
19	Being with family	51.9
20	Physical limitations	50.9
21	Out-of-pocket payment	50

Age (93.4%), lack of support in the area of behavior and motivation (84.9%), when traveling (83.9%), competing health priorities (82.1%), modifying factors (81.1%), no one to remind me (81.0%), being a female (78.1%), out-of-pocket payment (76.0%), unintentional (55.3%), laziness (54.71%), verbal or social persuasion (53.4%), cost of drugs (52.8%), being male (52.4%) were some o the barriers to the use health services (Table 10).

Table 10: Use of Health Services

S/N	Barrier Variable Items	Percentages (%)
1	Age	93.4
2	Lack of support in the area of behavior and motivation	84.9
3	Traveling	83.9
4	Competing health priorities	82.1
5	Modifying factors	81.1
6	No one to remind me	81.0

7	Being female	78.1
8	Out-of-pocket payment	76.0
9	Low socio-economic status	72.2
10	Regulation policy	70.8
11	Not having time	69.6
12	Difficulty in quitting an unhealthy lifestyle	69.3
13	Coming home late from work	67.1
14	Social norms	66.5
15	Financial problems	65.7
16	Advice from others	64.6
17	Poverty	63.9
18	Lack of community resources	59.4
19	Unintentional	55.3
20	Laziness	54.7
21	Verbal or social persuasion	53.4
22	The cost of drugs	52.8
23	Being male	52.4
24	The cost of caring for a person who is sick	50.6

On the other hand, age (94.5%), no one to remind me (87.2%), poverty (85.3%), competing health priorities (84.9%), difficulty in quitting unhealthy lifestyle (82.8%), Lack of support in the area of behavior and motivation (79.9%), and traveling (75.8%) were among the major barriers to following prescribed treatment plan (Table 11).

Table 11: Following Prescribed Treatment Plan

S/N	Barrier Variable Items	Percentages (%)
1	Age	94.5
2	No one to remind me	87.2
3	Poverty	85.3
4	Competing health priorities	84.9
5	Difficulty in quitting unhealthy lifestyle	82.8
6	Lack of support in the area of behavior and motivation	79.9
7	Traveling	75.8
8	Difficulty in quitting unhealthy lifestyle	75.7
9	Not having time	74.2
10	Out-of-pocket payment	73.7
11	determines Low socio-economic status my	73.0
12	Modifying factors	73.0
13	Unintentional	69.2
14	Advice from others	68.7
15	Social norms determines my	64.1
16	Verbal or social persuasion	64.0
17	Laziness	61.1
18	Coming home late from work	58.4
19	Regulation policy	57.3
20	Lack of community resources	56.4
21	Cost of caring for a person who is sick	55.5
22	Cost of drugs	55.3
23	Physical limitations	53.2

The result of the qualitative data also followed the same trend, with 2/3 of the participants stating that finance, ignorance, and social and environmental influences are the major social barrier factors to healthy lifestyles among the studied population.

DISCUSSION

The results showed that the major social and lifestyle factors constituting obstacles to medication adherence are financial issues, unintentional forgetfulness, and low socioeconomic status, among other factors in agreement with the literature (Kvarnström *et al*., 2021). Despite abundant data supporting the use of medicine to effectively treat high blood pressure, studies from around the world found that more than half of individuals with hypertension who are receiving treatment still have uncontrolled blood pressure (WHO, 2021). Other studies from around the world found that more than half of individuals with hypertension who are receiving treatment still have uncontrolled blood pressure (Solomon *et al*., 2023). The primary causes are the aforementioned social and lifestyle issues. It is crucial to keep in mind that any factor impeding the performance of recommended behaviors for patients to maintain optimal blood pressure control and therapy (medication and lifestyle) was classified by Borzecki *et al*. (2003) as a barrier to high blood pressure (HBP) lifestyle compliance. The results of this study are consistent with those of WHO (2021), who found that forgetfulness, inconvenience, and being overly committed to other obligations were barriers to medication adherence. Despite being a psychological component, forgetfulness leads to the physical act of taking medication, resulting in complications or pharmacological side effects, as well as difficulties breaking a habit. The patient has to be reminded by their family to increase medication compliance as it improves adherence or sets an alarm. Our studies are in agreement with the findings of Boima *et al*. (2015), who reported that patients are concerned about becoming long-term drug dependent. Physical inactivity, age, a lack of community resources, laziness, socio-cultural norms, a lack of support for behavior and motivation, patients who are mothers, being female, verbal or social persuasion, and being a woman are the major social lifestyle barriers to engaging in physical activity (Moore *et al*., 2023). The lack of awareness about the value of physical activity likely contributed to the outcome, as there was no internal incentive on the part of the respondents to overcome these obstacles in the absence of external encouragement. It is important to keep in mind that different communities and cultures have different attitudes toward physical activity (You *et al*., 2021).

The most important obstacles to self-BP monitoring include traveling, poverty, unintentional forgetfulness, a lack of community resources, a lack of time, coming home from work late, being fertile, and out-of-pocket expenses. Some of the findings are consistent with the work by Derington *et al*. (2019). Foods that are heavy in sodium, saturated fat, and added sugars are restricted in the DASH diet. It is a low-fat diet that is abundant in fruits, vegetables, whole grains, fish, poultry, nuts, and legumes. The findings of Bertoni *et al*. (2011) are comparable to those of this study in terms of cost, a problem with money, a lack of acquaintance with the DASH diet, and conflict with family members' dietary preferences, as well as cultural standards or social norms. They made some dissimilar discoveries, including inadequate availability, few options for eating healthy meals in restaurants, and product storage (Konikowska *et al*., 2023). No more than two teaspoons of salt should be consumed daily. If followed, it lowers BP by 2 mmHg–8 mmHg units (Carey *et al*., 2018). The cost of treating the sick individual is crucial to their way of life (Tesfa & Demeke, 2021; Li *et al*., 2022).

Wang (2020) asserts that support for one's physical, emotional, nutritional, and social needs—help that is typically only provided inside the family—improves one's quality of life. It might include information on products and financial aid, as well as knowledge, instruction, and guidance. Lifestyle medicine, in the form of consistent exercise and a nutritious diet, would help people lose weight (Yakubu, 2019). The lack of support for behavior and motivation, suggestions from others, verbal or social intimidation, difficulties stopping an unhealthy lifestyle, and societal standards are social barriers to moderate alcohol consumption. People in Idoma communities belong to a variety of social groupings, including clubs, family gatherings, age groups, and celebrations like the alekwu festival with masquerades and the "adangadaalekwuAfa" (a representative of a deceased ancestor) coming out. These celebrations include drinking a variety of beverages, such as beer and native farmed alcohol made from grains, as well as eating a variety of foods, such as pounded yam and "Okoho" soup (a type of soup made from a shrub tree's stem), which expose hypertensives to alcohol. Alcohol use stimulates the renin-angiotensin-aldosterone pathway and raises cortisol levels. This results in oxidative stress, inflammation, and endothelial damage (Touis *et al.*, 2018). The BMI categories are normal weight (18.5-24.9 kg/m2), overweight (between 25 and 29.9 kg/m2), and obesity (over 30 kg/m2). The WHR groups are normal (women 0.85 and men 0.9) and pathological (women >0.85 and men 0.9), according to Yakubu (2019).

Verbal and societal standards are social barriers to moderate alcohol consumption (Wallhed, Bakshi, & Andreasson, 2024). People in Idoma communities belong to a variety of social groupings, including clubs, family gatherings, age groups, and celebrations like the alekwu festival with masquerades and the "adangada-alekwu-

Afa" (a representative of a deceased ancestor) coming out. These celebrations include drinking a variety of beverages, such as beer and native farmed alcohol made from grains, as well as eating a variety of foods, such as pounded yam and "Okoho" soup (a type of soup made from a shrub tree's stem), which expose hypertensives to alcohol, and therefore, to socialize, they too partake. Due to impaired baroreceptor function and an imbalance in the control of the central nervous system, which results in increased sympathetic activity, alcohol appears to increase the tendency to vasoconstriction. Alcohol use stimulates the renin-angiotensin-aldosterone pathway and raises cortisol levels. This results in oxidative stress, inflammation, and endothelial damage. Accordingly, one of the six suggested lifestyle changes was to moderate alcohol consumption, which should not exceed 20–30g per day for men and 10–20g per day for women (Lewis-Kulzer *et al*., 2023; Touis *et al*., 2018).

Devkota *et al*. (2016) and Chean *et al*. (2019) observed that the lack of national guidelines for hypertension treatment was recognized as a barrier, notably in a qualitative comparison of studies, similar to the 52.6% barrier of regulating policy in this study. Regulation policy and modifying variables were the social lifestyle factors that 59.1% and 61.2% of respondents indicated as barriers to quitting smoking. In Nigeria, smoking rates are rising among the younger generation, but not among the study's older participants. The finding from the qualitative study is that participants stated that stressful experiences and situations make people smoke (Getz *et al*., 2023). Social lifestyle components and out-of-pocket expenses were found to be barriers to stress management. Because of inflation, living expenses are relatively high in Nigeria. The state of security, food, and drug pricing. All of them are obstacles to leading a prosperous life. As a result, they produce intense stress that raises blood pressure (Graff *et al.*, 2024). Stress was identified as a barrier that increases the heart's workload (Hendricks *et al*., 2023).

Participants also reported that the caregiving responsibilities for their families, the ongoing nature of therapy, dietary restrictions, and fear of complications, among other stressors, make hypertensive patients more vulnerable to stress (Gebrezgi, Trepka, & Kidane, 2017). Other studies have reported similar findings (Devkota *et al*., 2016; Kronish *et al*., 2017; AlHadlaq *et al*., 2019).

The results on the social lifestyle factor barriers to following prescribed treatment are comparable to those of Abaynew & Hussien (2021), who noted stress, forgetfulness, a lack of support, the high cost of medications, a lack of resources, a lack of self-motivation, a lack of time, social factors, and a fear of social isolation. Understanding these barriers is important for nurses to assist patients in overcoming these obstacles by offering focused assistance. This information can also be incorporated into nursing school programs' curricula to teach aspiring nurses how to identify and effectively handle lifestyle constraints. Cultural competency and sensitivity to the different patient groups and their particular lifestyle issues can be emphasized in education. The social lifestyle factors and barriers to the use of health services were competing health priorities, financial problems, and the cost of drugs (Subramaniam *et al*., 2022).

Limitations

The limitation of this study is its reliance on self-reported data, which may be subject to response bias and inaccuracies. Additionally, the present study only focuses on a single ethnic group in a specific region. This may limit the applicability of its findings to other populations.

CONCLUSION

This study has identified broad social and behavioral factors that work against communities of the Idoma tribe in Benue State, Nigeria, managing hypertension on their own. The best course of action at this point is to address these issues with a culturally appropriate intervention that removes the identified impediments. Respondents require interventions for each of the identified social barrier items under each of the healthy lifestyle variables based on the findings for each healthy lifestyle component. To help hypertensives in these communities stick to healthy lifestyles and eventually escape the threat of high blood pressure, each identified barrier under each healthy lifestyle should be addressed quantitatively and qualitatively as an intervention strategy. Future research should explore targeted interventions and strategies to mitigate these identified social lifestyle barriers, enhancing adherence to healthy lifestyle practices among hypertensive patients in the Idoma communities.

Conflict of Interest

The authors declare that they have no competing interests.

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